

REVISION	DATE
R0	2023.5.25

20 Ft UN PORTABLE TANK

SPECIFICATION OF 2.2 MPa T75 UN PORTABLE TANK

SPECIFICATION NUMBER : CASIS-21-22 (SC)-N-SP-R0

GA DRAWING NUMBER : CASIS-21-22 (SC)-N-GA-R0

PREPEARED BY: Yukang

REVIEWED BY: Zhou Xiaoxiang

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20' T75 UN PORTABLE TANK SPECIFICATION AMENDMENT	CONTRACT:
	PAGE 2 OF 5
	REVISION: R0
SPECIFICATION NO. : CASIS-21-22 (SC)-N-SP	DATE: 2023.5.25
AMENDMENTS LISTED BELOW INCORPORATE CHANGES TO THE ORIGINAL CONTAINER SPECIFICATION	

Rev. No.	DESCRIPTION OF REVISION	EFFECTIVE CONTRACT	APPROVED BY	DATE
R0			CIMC	2023.5.25

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1.0 General

Type of product	:	T75 UN Portable tank
Medium	:	LN ₂ / LO ₂ / LAr / LN ₂ O / LCO ₂
MAWP.	:	2.2 MPa (22 bar)
Water capacity	:	21 100 Liters (Maximum deviation ±1%)
Filling ratio	:	95% / 90%
Tare weight	:	8 150 kg (Maximum deviation ±3%) Optional pump tare weight +300 kg Optional Top side beam tare weight +150 kg
Load weight	:	27 850 kg
Maximum gross weight:	:	36 000 kg
Stacking	:	213 360 kg
Applicable regulations	:	IMDG、ADR、RID、US DOT 49CFR、 CSC、ISO1496-3、TC、TIR、UIC:IRS 50592
Inspection institution	:	Lloyd's Register Classification Society

2.0 Inner vessel

Design code	:	ASME VIII.1(U Stamp)& Mandatory Appendix 44
Material	:	SA240M 304N
Design temperature	:	-196°C / 50°C
MDMT	:	-196°C
Baffles	:	Two transverse baffles
Surface treatment	:	Degreasing

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3.0 Out jacket

Material	:	Q345R
Design temperature	:	-40°C / 50°C
MDMT	:	-40°C

4.0 Insulation

Type of insulation	:	Vacuum with multi-layer super insulation
Vacuum level	:	$\leq 0.08\text{Pa}$ (When off the factory)
Net evaporation rate	:	$\leq 0.34\%/d$ (LN ₂) (Ambient conditions:100kPa and 15°C)

5.0 Piping\Valve

Flow diagram	:	See Flow Diagram
Piping material	:	SA312 TP304
Valve types	:	See Valve list

6.0 Instrumentation

Liquid level gauge	:	Differential pressure gauge (Range : 0 ~ 4000 mmH ₂ O)
Pressure gauge	:	Mechanical pressure gauge (Range : 0 ~ 4 MPa)
Vacuum gauge	:	Thermocouple vacuum gauge

7.0 FRAME

Size:	:	20' 1CC ISO container
Dimensions	:	6058×2,438×2,591mm (20×8×8.5ft) (L×W×H)
Material	:	SPA-H weathering steel

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8.0 Cabinet

Material : Stainless steel

9.0 External corrosion protection

Shot blast : Low alloy steel Shot blast to SA 2_{1/2}

Paint : VESSEL: White

Primer coat : Hempadur Zinc 30 microns DFT.

Intermediate coat: Hempadur primer 40 microns DFT.

Final coat: Hempatex/Hempathane 50 microns DFT.

FRAME: White or Customer confirmed

Primer coat : Hempadur Zinc 30 microns DFT.

Intermediate coat: Hempadur primer 40 microns DFT.

Final coat: Hempatex/Hempathane 50 microns DFT.

10.0 Documentation

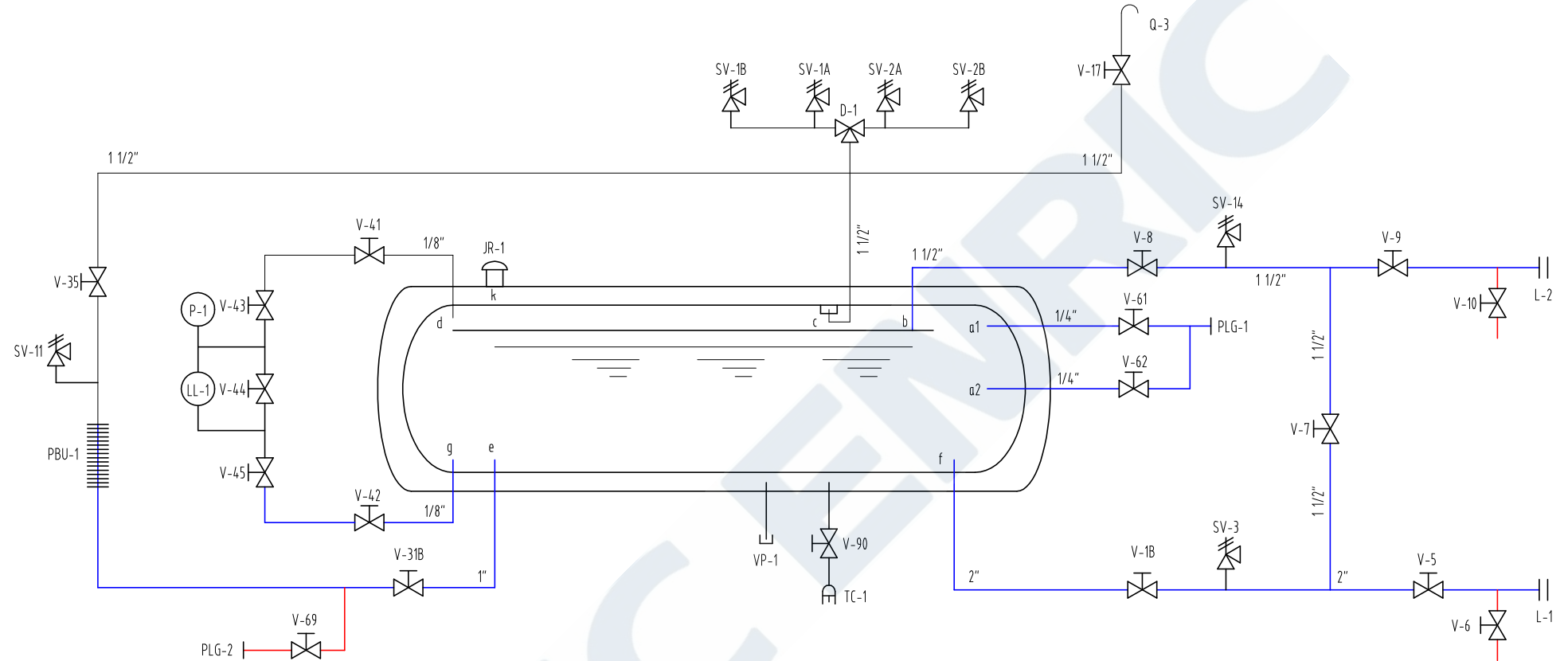
Dossier : Two copies of tank dossier in English

Manuals : Two copies of operating manual in English

11.0 Marking / Lettering

- All markings in line with code requirements, as far as possible combined on plates;
- Corporate logos and advertisement decals to be supplied by CIMC.
- Including the regulatory markings; tank owner numbers and logo.
- Lettering: tank lettered in accordance with client's standards and mandatory markings

Flow-NFG-001



ITEM 代号	DESCRIPTION	名称	ITEM 代号	DESCRIPTION	名称	ITEM 代号	DESCRIPTION	名称
SV-1A	Primary relief valve	内容器安全阀	V-10	Drain valve	残液排放阀	PBU-1	Pressure building unit	增压器
SV-1B	Primary relief valve	内容器安全阀	V-17	Manual vent valve	安全排放阀	P-1	Tank pressure gauge	压力表
SV-2A	Primary relief valve	内容器安全阀	V-31B	PBU control valve	增压器液相阀	LL-1	Liquid level gauge	液位计
SV-2B	Primary relief valve	内容器安全阀	V-35	PBU control valve	增压器气相阀	TC-1	Vacuum thermocouple gauge tube	真空热管
SV-3	Pipeline relief valve	管路安全阀	V-41	LP gauge isolation valve	液位计气相隔离阀	VP-1	Vacuum pumping Valve	高真空
SV-11	Pipeline relief valve	管路安全阀	V-42	HP gauge isolation valve	液位计液相隔离阀	JR-1	Vacuum jacket relief port	外壳防爆装置
SV-14	Pipeline relief valve	管路安全阀	V-43	LP gauge isolation valve	液位计气相阀	D-1	Relief diverter valve	三通球阀
V-1B	Fill & drain control valve	进出液阀	V-44	Gauge equalization valve	液位计平衡阀	L-1	Liquid inlet & outlet connection	液相进出口
V-5	Fill & drain control valve	进出液阀	V-45	HP gauge isolation valve	液位计液相阀	L-2	Recirculation connection	循环口
V-6	Drain valve	残液排放阀	V-61	Trycock valve (95%)	测漏阀	Q-3	Manual vent outlet	安全排放口
V-7	Precooling circulation valve	预冷循环阀	V-62	Trycock valve (90%)	测漏阀	PLG-1	Trycock connection	测漏口
V-8	Precooling circulation valve	预冷循环阀	V-69	Liquid sample valve	液体取样阀	PLG-2	Liquid sample connection	取样口 (液相)
V-9	Gas balance valve	气相阀	V-90	Vacuum thermocouple section valve	真空热管阀			

				南通中集能源装备有限公司 NANTONG CIMC ENERGY EQUIPMENT CO., LTD.			
设计 DESIGN	审核 CHECK	批准 APPROVE	日期 DATE	设备管理 EQUIPMENT	材料 MATERIAL	设备名称 EQUIPMENT NAME	FLOW DIAGRAM 流程示意图
制图 DRAWING	会签 SIGNATURE	日期 DATE	比例 SCALE	第 1 页 SHEET NO. OF	共 1 页 TOTAL SHEET	图号 DRAWING NO.	
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VALVE LIST-Flow-NFG-001-B

TAG No.	Part No.	size	Supplier	Note
L-1	Flange	DN50	CIMC	
L-2	Flange	DN40	CIMC	
Q-3				
V-1B	DJ-50Y.005	DN50 PN40	BAITU	
V-5	DJ-50Y.005	DN50 PN40	BAITU	
V-6	DJ-10G	DN10 PN40	BAITU	
V-7	DJ-40Y.005	DN40 PN40	BAITU	
V-8A	DJ-40Y.005	DN40 PN40	BAITU	
V-9	DJ-40Y.005	DN40 PN40	BAITU	
V-10	DJ-10G	DN10 PN40	BAITU	
V-17	DJ-40Y.005	DN40 PN40	BAITU	
V-31B	DJ-25Y.005	DN25 PN40	BAITU	
V-35	DJ-40Y.005	DN40 PN40	BAITU	
V-41	C9464JYB	DN10 PN40	REGO	
V-42	C9464JYB	DN10 PN40	REGO	
V-43	CYJ-3	0~4.0MPa 0~4.0mH2O	LANSHI	
V-44				
V-45				
P-1				
LL-1				
V-61	DJ-10G	DN10 PN40	BAITU	
V-62	DJ-10G	DN10 PN40	BAITU	
V-69	DJ-10G	DN10 PN40	BAITU	
V-90	4111L2B	1/8"	HOKE	
TC-1	DV-6R	1/8"	HASTINGS	
VP-1	ZKS-40	DN40	LANSHI	
JR-1		DN150	CIMC	
D-1	DQS-25C2	DN 25 PN40	BAITU	
PBU-1	200Nm3/h	1"-1.5"	CIMC	
SV-1A	06388.1006.6000	Set pressure:MAWP	HEROSE	
SV-1B	06388.1006.6000	Set pressure:MAWP	HEROSE	
SV-2A	06388.1006.6000	Set pressure:MAWP	HEROSE	
SV-2B	06388.1006.6000	Set pressure:MAWP	HEROSE	
SV-3	PRV 9432		REGO	
SV-11	PRV 9432		REGO	
SV-14	PRV 9432		REGO	